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1 the exposures to the B, C, and D categories were below all of
2 the benchmarks, so I was -- and I said in my deposition that as
3 we departed from the 15 fiber years, we became less and less
4 certain. But I didn't draw a bright line at any one of the
5 benchmarks, and certainly not at this one.

6 We happen to be well below it, but this is not the most
7 appropriate benchmark by any means because of the contamination
8 by the chrysotile fibers.

9 Q So, you would have excluded this claimant? This would be
10 a claim that you would not give further consideration to?

11 THE COURT: Mr. Mullady, I'm sorry, but I'm confused.
12 Are you asking her whether she would have considered this as
13 part of the statistics that she was calculating to put into her
14 cumulative exposures? Or are you asking her whether if she
15 were somebody doing a claims review and on an individual basis
16 she would be looking at this individual as somebody on an
17 individual basis to get further review? I'm confused as to
18 what you're asking.

19 MR. MULLADY: I'm asking her if the exposure that was
20 used for Category B, D, and E, if the -- if the dose, if you
21 will, was 3.2, and it was at the benchmark, would that claim
22 have passed through the filter such that there would be some
23 reliable evidence or some reliable science that it would -- it
24 should be considered further, or would it not make it through
25 the screen under the theory that there's no such evidence?

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1 THE COURT: But she isn't doing an individual claims
2 analysis. She's doing population screening.

3 MR. MULLADY: Right. Well, for purposes of the
4 population screening, then.

5 MR. BERNICK: Your Honor, could I -- could I be just
6 heard at sidebar for just half a moment so that we can continue
7 here? But -- just for a moment?

8 THE COURT: Yes. Counsel approach the bench.

9 (Off-the-record discussion at sidebar)

10 Q Okay. Dr. Anderson, I apologize for that delay. Going
11 back to -- I want to go back to your report, because I want to
12 put this in the terminology that you used in your report. At
13 Page 9 --

14 MR. BERNICK: The same report, 431?

15 MR. MULLADY: Actually, this is the July report,
16 which is 432.

17 MR. BERNICK: 432.

18 MR. MULLADY: Sorry.

19 Q Okay. Do you see where you write, in the second to last
20 paragraph here, Dr. Anderson, "For the benchmark signifying the
21 exposure at which the mesothelioma relative risk equals two, no
22 values for the B, D, or E claimants exceed 3.2 fiber millimeter
23 years, and exposure derived using EPA's value for potency,
24 which does not distinguish between chrysotile and amphibole
25 fibers." And then, down further in this, the next paragraph --

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1 MR. BERNICK: For completeness could you read the
2 very next sentence?

3 MR. MULLADY: Of course.

4 Q "All the values are clearly below the doubling doses for
5 chrysotile and Libby amphibole of 79 and 8.9 fiber years,
6 respectively." Okay? "Based on these observations I conclude
7 that it is scientifically implausible that disease in Exposure
8 Categories B, D, or E can be attributed to exposure to any
9 Grace asbestos containing product. As demonstrated above, for
10 claimants reporting exposure solely in categories B, D, or E,
11 it cannot be determined in a scientifically sound manner that
12 they had sufficient cumulative exposures from a Grace product
13 to cause disease. Furthermore, these exposures have not been
14 demonstrated scientifically to contribute to the risk of
15 disease, even when added to other significant exposures.
16 Therefore, I conclude that these claims do not have merit, and
17 should not be considered further." Now, going back to my
18 hypothetical, what I'm asking you is, since we have B, D, and E
19 in the range of that doubling dose, it is not below it, as you
20 say in your report. It is at it. Would that have been a claim
21 that does not have merit and should not be considered further?

22 A Well, first of all, we're not at it. We're below it.
23 Second of all, that is not the -- I mean, I didn't take just
24 one benchmark. I've already said that's a benchmark, it's the
25 lowest one. It came from the EPA dose response data that

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1 contained chrysotile. If we look to the other benchmarks
2 that were here, I was discussing all the benchmarks, and I was
3 discussing the relative risk. I don't know where that is now.
4 But I was discussing the relative risk from the Libby data,
5 which would be applicable to the products that contained VAI
6 only, and I was discussing the 78 number, close to 80, which is
7 applicable to the chrysotile, and if you mix, for some of the
8 products that were mixed between the two, the potency would lie
9 somewhere between there, so the more appropriate comparison
10 would be to the 80 for the VAI -- I mean, to the 8.9 for the
11 VAI, to the 80 for the chrysotile only products, and these are
12 mixtures, and to the somewhere in between, probably around 40
13 for the products that are mixed between the Libby vermiculite
14 and the chrysotile. And so, I probably would have it -- in
15 your hypothetical I probably would have said that there's no
16 such evidence.

17 Q Okay. Let me ask you this, Doctor, and this kind of goes
18 back to where I started my cross examination on the assumption
19 you made about a continuous 45-year history of exposure, even
20 where you didn't have that evidence you did that to be
21 conservative. I understand that's your opinion.

22 A That's right.

23 Q In the case of a worker, or let's say a group, a
24 designation, a category, if you had a certain period of
25 exposure to Grace products that was above the doubling dose

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1 threshold, clearly comfortably above it, and you assumed --
2 strike that.

3 MR. MULLADY: Let's go to FC-105.

4 Q This is a little busy, this chart, and I'm going to walk
5 you through it. We're trying to determine here how you would
6 have treated a claimant with exposure to non-Grace asbestos at
7 some point in his career, and Grace products.

8 What I've done here is asked you to assume that we have a
9 claimant who had an average TWA of .06, and he works 45 years
10 with Grace products and only Grace products. Now, his
11 cumulative exposure would only be 2.7 fiber years, which is 45
12 times .06. Does that make sense to you?

13 A Well, first of all, this analysis is for these groups
14 exposed in these labor categories to Grace products.

15 Q Right.

16 A And if they got exposed to something else they didn't have
17 the 45 years for the Grace product.

18 Q Okay. Well, if they got exposed to something else,
19 though, you would assume that they had full occupational
20 exposure to Grace during that period of time, correct?

21 A Well, if they -- if they got --

22 MR. BERNICK: I'm sorry. The question is that --
23 you're asking her whether if it's true that, in fact, they were
24 exposed to non-Grace product --

25 MR. MULLADY: Right.

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1 MR. BERNICK: -- she nonetheless analyzes them as
2 being exposed for 45 years only to Grace products.

3 MR. MULLADY: Yes.

4 Q That's what you did, right?

5 A What are you asking me? I assumed that they got exposed
6 to these -- in these nature of exposure job categories only to
7 Grace products for 45 years --

8 Q For 45 years.

9 A -- in order to answer the question of how likely is it
10 that the Grace product exposure categories caused their
11 illness.

12 Q Okay. And in this hypothetical there's a nine-year period
13 when we don't know what he's doing, and his -- but his overall
14 exposure is below your benchmark, and I would assume that for
15 this person if he were a category you would say there's no such
16 evidence and he doesn't pass through your filter? Correct?

17 MR. BERNICK: Given the question that was being
18 posed, that question then cannot be asked. Your Honor, this is
19 about the fifth time that he's been through it. If you make an
20 assumption of 45 years it excludes everything else. If you
21 then want to include something else, you can't make the
22 assumption anymore. This is why these slides --

23 MR. MULLADY: That's what the next slide is.

24 MR. BERNICK: -- are a waste of our time.

25 MR. MULLADY: They're not a waste of anybody's time.

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1 THE COURT: Well, that's what this slide is, too.
2 This witness has been very clear that she is assuming,
3 regardless of the fact that some individuals have acknowledged
4 that they have worked for other companies, filed claims against
5 other companies, had exposures to asbestos from other
6 companies, that in making these job description categories in
7 order to figure out whether Grace's product could have caused
8 the disease that the claimants are claiming against Grace, that
9 she assumed that they were exposed only to Grace's product
10 within those categories for 45 years. That -- she said that at
11 least 15 times on the record. So, the assumption that they
12 could have worked for anybody else in that 45-year period is
13 inconsistent with her assumptions. Unless you want to say they
14 had a longer work history than 45 years, in which case all the
15 math changes.

16 Q If you knew that the total cumulative exposure for a
17 category was above the doubling dose benchmark, but you also
18 knew that the Grace exposure represented -- embedded within
19 that total was below the benchmark, would it be your view that
20 the Grace exposure was a substantially contributing factor?

21 A I think what I said earlier is exactly what I think is
22 appropriate. This analysis was about looking specifically at
23 how -- at a very, very high screen value the Grace product
24 exposures could contribute. Where anything was close, as in
25 the A's and C's, we said review on a case by case basis. At

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1 that point, it would be appropriate to look at other exposures.

2 In a hypothetical in the abstract, (1) this isn't an
3 individual review and (2) we could go through any number of
4 hypotheticals but that's just not going to help us and it
5 wasn't the subject of my analysis. I have said that somewhere
6 else at some appropriate time these should be looked at on a
7 case by case basis. And that's not what I was doing.

8 Q Let me ask you about your use of Dr. Lees' work. You told
9 us on direct examination you relied on data developed by Dr.
10 Lees, correct?

11 A That is correct.

12 Q You, yourself, however did not measure airborne asbestos
13 concentrations from application of Grace products in activities
14 such as spray on fireproofing.

15 A No, I didn't and the hundreds and hundreds of risk
16 assessments I've done, I have not been the one to measure.
17 It's the usual circumstance.

18 Q And you can't tell us about any site where you've ever
19 been to where Grace asbestos containing material was being used
20 by workers in the course of their jobs, correct?

21 A Not that I recall.

22 Q All right. Now you used Dr. Lees' figures for
23 concentration of asbestos that workers would be subject to as
24 shown in your July report Table 1, correct?

25 A I used -- I think I -- I think I heard what you said. I

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1 used Dr. Lees' TWA mean concentrations as a source of the
2 concentration term in my analysis. That is correct.

3 Q Let's take a look at how you used Dr. Lees' data. Can we
4 go to your Table 4 in Exhibit 432.

5 A Which report are you at?

6 Q July 31. I want to -- first of all let's go to the top.
7 This is Table 4, this is the screening level maximum asbestos
8 cumulative exposure by category of exposure and product type.
9 Correct?

10 A This is correct. This is one of my other analysis. I
11 said that I did several levels of analysis.

12 Q Yes.

13 A And this is one of the other levels of analysis. The
14 screening level values I've presented here today were the most
15 extreme upper bound assumption values.

16 Q Okay. You have a category here vermiculite and
17 chrysotile. My question for you is do you know how many
18 studies Dr. Lees relied on for all the products in the mixed
19 vermiculite and chrysotile category?

20 A I don't know how many. I assume that Dr. Lees has
21 testified. I don't recall exactly.

22 Q If I were to represent to you that Dr. Lees only had seven
23 studies from ten work sites, would that sound about correct?

24 MR. BERNICK: Object to the form of the question.

25 He's asking her to assume as a fact that that's what he said.

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1 Object to the form of the question. It purports to recite the
2 testimony of the witness. I don't think it does so correctly.
3 If wants to have the witness assume that statement, I don't
4 have a problem with it.

5 Q All right. I'd ask you to assume that the data that Dr.
6 Lees provided for this product category consisted of seven
7 studies from ten sites, okay?

8 A I don't like to assume anything about someone else's data.
9 It's in his report and I mean what are you going to ask me
10 about it?

11 Q In the Monokote III test that Dr. Lees used, do you know
12 how many building measurements were taken in? How many
13 buildings he took measurements from?

14 A You are asking me to recite data from his report and I
15 don't recall the data from his report.

16 Q I'm just asking you if you know.

17 A I just don't recall.

18 Q I would represent to you and ask you to assume
19 hypothetically that it was ten buildings from which he took
20 measurements for Monokote III, okay?

21 A That's a pretty good data base.

22 Q Well Monokote III was used in thousands of buildings,
23 wasn't it?

24 A I think what you are trying to ask me is could it be
25 representative to have --

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1 Q No, I asked you if Monokote III was used in thousands of
2 buildings?

3 A I know it was widely used. I don't know how many
4 buildings.

5 Q Okay. And Zonolite acoustical plaster was also used in
6 thousands of buildings, wasn't it?

7 A That's correct.

8 Q Same thing for Grace insulating cement, correct?

9 A Large numbers of buildings. I don't know how many.

10 Q Do you know if Grace had any kind of a systematic or
11 scientific process to select the sites at which exposure data
12 was collected and then provided to Dr. Lees?

13 A I believe that was in Dr. Lees -- that's in his purview
14 not mine.

15 Q Okay, you don't know if they did or they didn't.

16 A I don't recall.

17 Q Okay. I mean and do you know whether they, Grace,
18 randomly selected the sites?

19 A I think you are asking me a lot of questions --

20 MR. BERNICK: Objection, asks -- excuse me --
21 objection. We all know what the answer -- she's already said
22 what she did and what she didn't do.

23 THE COURT: Well --

24 MR. MULLADY: She could know that they randomly
25 selected the sites. I don't know that.

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1 THE COURT: You can keep asking her information about
2 Dr. Lees' reports. I think her answer is that she's read them
3 but she doesn't really have -- she doesn't know specifically
4 what he did. But you can keep asking. She's read the report.
5 She may know, she many not know. You can answer if you know
6 Dr. Anderson.

7 A I don't recall exactly how many buildings. I can tell you
8 what I do recall. We very often had very little information.
9 We are trying to characterize these individuals that you keep
10 talking about, but these job categories. This is about a job
11 specific or a site specific exposure. Often the only thing we
12 can do is simulate but --

13 THE COURT: No.

14 Q But I didn't ask you that, ma'am.

15 MR. BERNICK: Excuse me. Let her finish the answer.

16 MR. MULLADY: Well we're never going to complete this
17 examination.

18 MR. BERNICK: This may be true but for other reasons.
19 I think the witness is entitled to the courtesy of being -- of
20 not being interrupted.

21 THE COURT: No, in this instance, Mr. Mullady is
22 correct. The question was whether or not Grace had a
23 scientific way of choosing the data selected to give to Dr.
24 Lees. She either knows or she doesn't know. It's an either I
25 do know or I don't know.

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1 Dr. Anderson, if you could just answer if you do or
2 don't know please and then maybe we can move on from there.

3 A I don't know exactly how they chose the buildings.

4 Q Thank you. Can we have ACC/FCR-3015 please? I want to
5 ask you if you've seen a particular -- if you are familiar with
6 a particular sample of Dr. Lees' data. This is, this exhibit,
7 I would represent to you ma'am is one of the ten measurements
8 that Dr. Lees relied on for his exposure averages in -- for his
9 exposure averages in this case. This is the cover page for the
10 study and then there's a second page that has the data,
11 September 28, 1970. The laboratory is Werby Labs. There are a
12 list of samples and LA is a reference to the building from
13 which the samples came.

14 Are you familiar with this particular data set that
15 Dr. Lees supplied to you?

16 A No.

17 MR. BERNICK: I object.

18 THE COURT: She said she's not familiar with it. The
19 objection is overruled.

20 Q Now, and I would represent to you -- strike that. Don't
21 take this exhibit down. I want to talk to you now about Dr.
22 Lees' average exposures for the A through E PIQ categories.

23 A Okay.

24 Q First of all, as I understand it neither you nor Dr. Lees
25 analyzed the actual TWA exposure to Grace products for any

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1 individual claimant. Is that correct?

2 A That was not the point of the analysis, correct.

3 Q And you didn't have any individual claimant TWA exposure
4 data from which to calculate the claimant's exposure?

5 MR. BERNICK: Well if the question is does she have
6 any individual claimant's TWA data to understand that. If the
7 question is whether that -- if the question I believe assumes
8 that it was part of her process to require that, and I think
9 that is contrary to her testimony, so I object to the form of
10 the question.

11 THE COURT: I believe that the question is contrary
12 to her testimony. She did have PIQs available. She has stated
13 that.

14 MR. MULLADY: Okay, fine.

15 Q What you did, Dr. Anderson, was you calculated cumulative
16 average exposure values drawn from Dr. Lees average values,
17 correct?

18 A No. That's not correct. I calculated maximum cumulative
19 exposures.

20 Q Maximum cumulative exposures. Let's go to 432, Table 11.

21 A And I would like to tell you that I know there is one typo
22 mistake in one report where that was referred to as an average
23 cumulative -- average cumulative exposure and I apologize for
24 that error but these are maximum cumulative exposures using
25 average concentrations, average mean concentrations.

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1 Q The averages were supplied to you by Dr. Lees?

2 A That's correct.

3 Q Let's look at one of Dr. Lees' -- let's look at Table 11.

4 MR. BERNICK: Where's this from?

5 MR. MULLADY: 432.

6 MR. BERNICK: 432, what page?

7 MR. MULLADY: It's Table 1. Do we know the page? I
8 don't know that these pages are actually numbered in the back.
9 We're using tables, I don't think there are page numbers.

10 MR. BERNICK: Okay. Go ahead. I'm sorry.

11 Q Okay. Now are you telling us that -- can we have the
12 title of this first of all? These are eight hour time waited
13 average concentrations in fibers per millimeter, PCME, by
14 category of exposure and product type, correct?

15 A Right. And this is from my report, correct?

16 Q From your report.

17 A Right.

18 Q Directing your attention to spray fireproofing on Table 1.
19 You have a TWA average of 0.3 -- excuse me, 0.033, 0.0338, do
20 you see that?

21 A Yes.

22 Q This is the average TWA for everyone in Category D for
23 that product, correct?

24 A That's correct.

25 Q That's not the maximum exposure for that group, it's the

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1 average, correct?

2 A This is the mean concentration which is one factor in
3 determining the cumulative exposure.

4 Q And mean is another word for average, right?

5 A That's correct. For the concentration term.

6 Q Yes. Now PIQ Category D, like all the PIQ categories
7 encompasses a variety of distinct jobs. Would you agree with
8 that?

9 A It could be a variety of different people who happen to be
10 in this space, yes.

11 Q Doing different jobs.

12 A That's right.

13 Q All right. So for example, Category C you have both
14 sprayers and helpers in that category, right?

15 A In Category C you have people who applied the product. I
16 don't know about the helpers, it depends on what they were
17 doing.

18 Q Okay. Were you here when Dr. Lees was testifying about
19 sprayers and helpers?

20 A No, I wasn't.

21 Q Okay. All right. Now as I understand your analysis, you
22 are assuming that individuals who work in these PIQ categories
23 will have exposures that may vary from day to day or even from
24 year to year, but over time all individual TWA exposures will
25 converge to the average TWA exposures for everyone in the PIQ

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1 category. Is that correct?

2 A For the job. It's not for the people, it's for that job.
3 For what they are doing or for that space in proximity to a
4 variety of activities. It's where they are with respect to
5 what's going on in the space.

6 Q Well when you say job, you mean a mixer, a remover or
7 cutter, an installer.

8 A That's right.

9 Q An out-of-sight person or an in-a-space person.

10 A That's right. So it's for someone in a particular
11 proximity or someone in that job category.

12 Q Now what, Dr. Anderson, what if any assumptions did you
13 make in calculating that the TWA exposures of individual
14 workers in these categories were converged to the average
15 exposure for all workers in the category?

16 MR. BERNICK: Objection to the form of the question.
17 Just got done answering.

18 THE COURT: I didn't understand that she calculated
19 the TWA means. I thought she was provided with the TWA means.

20 MR. BERNICK: She just got done saying it's for a
21 category. You are assuming that she went backwards from
22 individuals and then finds the mean with respect to individuals
23 and she's testified on direct and on cross examination
24 precisely to the contrary.

25 THE COURT: Just for purposes of making sure that I

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1 understand the testimony, the question is what if any
2 assumptions did she make regarding the TWAs of individuals. I
3 believe that doesn't fairly state the evidence. But just so
4 I'm clear that that is in fact not what she did.

5 MR. MULLADY: I'll go back and lay a foundation.

6 Q What did you do with the average cumulative exposure
7 values that Dr. Lees provided to you?

8 A I think that's exactly what I've talked about all morning.
9 I used the average, his maximum average TWA concentrations, for
10 the particular nature of exposure categories to define exposure
11 for that category. That's for the claimants in that --

12 Q You defined exposure for that category, using the average
13 that was provided to you by Dr. Lees?

14 A The maximum mean concentration.

15 Q Right. And in order to use that average, you had to make
16 an assumption, didn't you, that despite the very nature of what
17 these people in these categories were doing from day to day
18 that over time the exposure will be at or around the average?

19 A Yes. And I gave a fairly lengthy discussion about that
20 why that is the generally accepted way to do it and why I think
21 that's appropriate.

22 Q Now in doing it that way though didn't you have to assume
23 that there was no aspect of a worker's exposure on any given
24 day that could be used to predict what that worker's exposure
25 would be on any subsequent day?

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1 MR. BERNICK: Object. I'm sorry, can I have the
2 question read back please?

3 THE COURT: Can you repeat, Mr. Mullady, otherwise
4 it's going to take us ten minutes.

5 MR. MULLADY: Sure. Anything to speed it along Your
6 Honor.

7 Q In doing what you did you had to make an assumption,
8 didn't you that there is no aspect of a worker's exposure on
9 any given day that could be used to predict that worker's
10 exposure on any subsequent day?

11 A I --

12 MR. BERNICK: I'm sorry. I object to the form of the
13 question.

14 THE COURT: I think that is not a summary of what the
15 witness has testified to.

16 MR. BERNICK: It's almost nothing --

17 MR. MULLADY: I realize that we haven't gotten into
18 this yet. I'm asking her if that's an assumption that she had
19 to make to use an average.

20 A What I had to do to use an average is -- was one that I
21 had 11,250 days of exposure. If two days happen to be
22 implemental in somebody's 1,250 in this category it would be
23 immaterial and the whole point was to discuss the large
24 influence of environmental factors on measurements so that over
25 time those factors cancel out and we get a good measurement for

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1 that particular nature of exposure category.

2 So to single out two days would not have made a
3 difference to my analysis, if that's what you are asking me.
4 One individual.

5 Q Let me see if I can go at it this way. You, on direct, I
6 believe you discussed the concept of environmental variability,
7 correct?

8 A That's right.

9 Q And you used wind as an example.

10 A That's right.

11 Q There is also something used as inter-worker variability,
12 correct? Are you familiar with that term?

13 A As what?

14 Q Inter-worker variability.

15 A I said that there could be some variability amongst
16 workers, and that the environmental factor vastly made the
17 difference.

18 Q Well let's test that. For example, some people are right
19 handed and some people are left handed and some people are tall
20 and some people are short. Correct?

21 A Correct.

22 Q Those are qualities in a person that are going to persist
23 over time. Correct?

24 A I think that Dr. Lees, as I understand, addressed that
25 issue.

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1 Q Yes, he did discuss that. And I think he said the
2 differences between workers might effect exposure. Do you
3 agree with that?

4 A In a very minor way and over a long period of time the
5 environmental factors vastly swamp the slight variations in the
6 workers.

7 Q So if there was a circumstance, hypothetically where right
8 handed workers were exposed to more asbestos, something about
9 the right-handedness in how the job was performed causing them
10 to be exposed more, that would no longer be random. That would
11 persist over time, correct?

12 A Yes, and I said that that would make very little
13 difference to this entire category of exposures and that the
14 environmental variation would be backed by the dominant factor.
15 That would be -- pardon.

16 Q Unlike the person, I believe you said it's inconceivable
17 on direct. I think you said it's inconceivable that someone
18 would be in the wrong place at the wrong time for 45 years.
19 But it wouldn't be inconceivable for someone that had the
20 characteristic like right-handedness to have an exposure that's
21 much different than other workers for an entire 45 year working
22 career. Most people are right handed.

23 A You would have to convince somebody else that this is
24 going to make very much difference. We are talking about
25 exposure to a job category. We are not talking about

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1 individuals. We are talking about a long period of time and
2 we're talking about a dominant kind of parameters that cause
3 the variability in data. I don't think right-handedness and
4 left-handedness are going to put -- to make that mean differ.

5 If you have some odd individual who happens to be
6 somewhere way out on a curb, it's not going to change this
7 categorical definition at all. And I said in some of my final
8 analysis that it would be a very low probability event given
9 all of the considerations that went into the analysis that
10 anyone in a B, C or D would experience anything on that far end
11 of the curve.

12 Q Let's talk about what workers are doing in the real world.
13 I notice on GG-2271 which we have on the ELMO here you've
14 identified as environmental variables, variation by sampling
15 location, job and time. Why was -- why is job an environmental
16 variable? If I'm a sprayer, why would my being a sprayer be
17 subject to the same sort of environmental variability as the
18 blowing of the wind?

19 A Well in this particular case I was thinking of variability
20 around different kinds of positioning of people in these job
21 categories that they can be different but they are going to
22 move around to converge and they are totally random. There is
23 not going to be any systematic way that would cause a bias in
24 that information.

25 Q You believe it's going to be totally random on a day to

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1 day basis whether --

2 A Random over --

3 Q -- a sprayer becomes a helper for example?

4 A I think -- what was the last part of that?

5 Q Whether a sprayer becomes a helper. That's a random event
6 that could change from day to day?

7 A Well I mean, again, I'm defining exposures for these job
8 categories. Now if someone is an A for part of 45 years and
9 they change and they become a different category they are going
10 to have different exposures. But again this isn't an
11 individual exposure.

12 Q I'm sorry. I don't think I made myself clear in my
13 question. I apologize for that. I'm asking you to focus in on
14 variability within a category, within a category, within B, D
15 and E. We have a number of different jobs being performed by
16 workers of different skill abilities in different -- sometimes
17 in different trades. Is that correct?

18 A That's correct. Certainly in the B, D and E for
19 bystanders they can be different again, but there are different
20 trades involved. Perhaps in the Bs.

21 Q In order for your assumption to be corrected over time the
22 exposures of people within this category will converge to the
23 mean, you have to -- these workers have to be independent. It
24 has to be completely random from day to day which of these
25 activities and which of these exposures are getting, correct?

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1 MR. BERNICK: Objection. That's an assumption.
2 Q That's an assumption that you have had to make to conclude
3 that it converges to the mean?

4 MR. BERNICK: Objection to the form of the question.
5 First of all the word independent. I don't believe there's
6 been any dialogue on that, no definition of it, no use of it.
7 And then the second part of the question is you have to assume
8 that there is complete randomness. I don't know what that has
9 to do with the first part of the question and therefore object
10 to the form of the question.

11 THE COURT: You've got words in there that have
12 introduced new elements that have not been part of the
13 discussion. And you've got a compound question because you
14 entered the word correct, question mark, before you asked the
15 next part several times. If you want to rephrase and break it
16 down into parts, fine.

17 MR. MULLADY: Okay.

18 Q Let's -- let me ask you this doctor. In your expert
19 reports you cited your general reference material, the things
20 you've used and relied upon in reaching your opinions in this
21 case. Have you cited us in your reports to any studies or
22 articles that would substantiate the proposition that over time
23 workers' asbestos exposures are going to converge to the
24 average for the category or general type of work that they do?

25 A What I have cited is roughly 20 or 30 years of experience

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1 dealing with the variety of environmental data sets. In air,
2 with pesticides, in water, at waste sites, for different jobs
3 for different situations. We sometimes even build simulated
4 chambers just to have an environment where we can measure what
5 the experience for a particular job or person engaged in an
6 activity might be. These are totally acceptable ways to make
7 these judgments.

8 In this case we are defining the likely exposure to
9 these individuals in these categories given a body of
10 information. It's for the category and you keep asking me
11 about individuals. So I don't know what you are asking me to
12 respond to otherwise. I guess I don't understand your
13 question.

14 Q Isn't it the case that certain workers doing certain tasks
15 that by virtue of inter-worker variability subject them to
16 higher than average exposures? Isn't it the case that their
17 exposures are not going to converge to the average over time?

18 MR. BERNICK: I'm sorry. I understand the second
19 part of the question that there are other people who will never
20 converge to the average.

21 MR. MULLADY: Correct because they are always going
22 to be above the average.

23 A I think within these job categories there is no evidence
24 that I have that that individual that I said earlier is in the
25 wrong place at the wrong time all the time. I showed the